Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. **Applicant/Contact name and address:**

   Kalispell Regional Healthcare – Kalispell Regional Medical Center
   310 Sunnyview Lane
   Kalispell, MT 59901

2. **Type of action:** Application for Beneficial Water Use Permit 76LJ 30065861

3. **Water source name**: Groundwater

4. **Location affected by project:** The place of use is generally located at the Kalispell Regional Medical Center, SESW, Sec 6, Township 28N, Range 21W, Flathead County, MT

5. **Narrative summary of the proposed project, purpose, action to be taken, and benefits:**

   The Applicant proposes to divert and use groundwater for geothermal cooling purposes January 1st thru December 31st at a rate of 4.14 CFS up to 2,079 AF from three production wells in the NWSESW of Section 6, Township 28N, Range 21W, Flathead County, Montana. Water will be re-injected into three wells located in the SWSESW of Section 6, Township 28N, Range 21W, Flathead County, Montana. Four wells currently exist; 2 additional wells (one production and injection) will be installed as the building is expanded to full build out. The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. **Agencies consulted during preparation of the Environmental Assessment: (include agencies with overlapping jurisdiction)**

   -U.S. Fish and Wildlife Service and Montana Natural Heritage Program: Endangered, Threatened Species and Species of Special Concern, Wetland Mapper program
   -Montana Department of Fish Wildlife & Parks (MFWP)
   -Montana Department of Environmental Quality's (MDEQ) Clean Water Act Information and PWS Drinking Water Watch databases
   -U.S. Natural Resource Conservation Service (NRCS); web soil survey
   -Montana Historical Society

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The Flathead River and Flathead Lake are not listed by DFWP as chronically or periodically dewatered. Upon analysis by the Department the source aquifer, Flathead River and Flathead Lake were found to have water in excess of that requested by the Applicant.

Determination: No impact.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

According to the MDEQ's Clean Water Act Information Center in 2012 Flathead Lake was listed as having one or more uses impaired due to one or more of the following probable causes: mercury, nitrogen (total), phosphorous (total), polychlorinated biphenyls and sedimentation/siltation. In 2012 Flathead River was categorized as having insufficient data to asses any use. The Applicant is proposing to utilize groundwater. This appropriation will likely reduce discharge from the Deep Aquifer to Flathead River and Flathead Lake in an amount equal to their consumptive use. This is a non-consumptive use, therefore no water is expected to be consumed and the quality of water is not expected to change.

Determination: No significant impact.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Groundwater flow paths will be altered due to the proposed project. The proposed use is non-consumptive and will not reduce discharge from the source aquifer to Flathead River or Flathead Lake. Modeling done by Department groundwater hydrologists show that an adequate supply of ground water exists for the proposed appropriation and that no significant negative impact will occur to existing water users and surface/groundwater resources.

Determination: No significant impact.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The geothermal cooling system equipment associated with this permit includes six wells, piping and five heat exchangers (HX). The heat exchangers are single wall units that dissipate heat from one water system to another by passing water in close proximity to each other. The proposed use is non-consumptive, the groundwater associated with this permit will only supply water to the heat exchangers and be re-injected; it will not route to or through any other part of the building. Each well was drilled by a licensed well driller (license # WWC-335). The geothermal cooling system is managed by Johnson Controls through a series of program inputs, sensors and logic control programming. The control panels regulate the operation of the ground water pumps. The system includes two Onicon F-3500 electromagnetic flow meters. The geothermal system was designed by Associated Construction Engineering, Inc (ACE). The proposed project shall not impact any channels, barriers, riparian areas and dams. Modeling done by Department groundwater hydrologists show that no significant negative impact will occur to existing water users and surface/groundwater resources.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program (MNHP) website was reviewed to determine if there are any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern" in Township 28N, Range 21W that could be impacted by the proposed project.

According to MFWP there is one plant species of concern, the Pygmy Water-lily (Nymphaea leibergii). This area has been disturbed for over 20 years, impact to the sensitive plant species has most likely already occurred.

The Bull Trout (Salvelinus confluentus) is listed as threatened by the USFS. The Wolverine (Gulo gulo), Fisher (Martes pennanti) and Westslope Cutthroat Trout (Oncorhynchus clarkia lewisi) are listed as sensitive species by the USFS. The Great Blue Heron (Ardea herodias), Pygmy Whitefish (Prosopium coulteri) and Veery (Catharus fuscescens) are listed S3 to S3B by MFWP meaning their populations are at risk because their numbers are very limited. The Lake Trout (Salvelinus namaycush) is listed S2 by MFWP, meaning their populations are at risk because their numbers are extremely limited and/or rapidly declining. An adequate quantity of water will still exist in the Flathead River and Flathead Lake to maintain existing populations of both threatened and sensitive species of fish. The proposed project is for geothermal cooling, which is a non-consumptive use. It will not impact any threatened or endangered fish, wildlife, plants and aquatic species or any species of special concern.

Determination: No significant impact.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: N/A, project does not involve wetlands or critical riparian habitats

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: N/A, project does not involve ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to soil survey data provided by the NRCS within the place of use soils are mostly Kalispell loam. This soil is well drained and not susceptible to saline seep. The use of water for geothermal purposes will not cause degradation of soil quality and stability.

Determination: No impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Any impacts to existing vegetation will be within the range of current disturbances due to current development within the area, therefore noxious weeds are not expected to be established or spread.

Determination: No impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Adverse air quality impacts from increased air pollutants are not expected as a result of this project. No air pollutants were identified as resulting from the applicants proposed use.

Determination: No impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: N/A, project is not located on state or federal land.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

All impacts to land, water and energy have been identified and no further impacts are anticipated.

Determination: No impact.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is located in an area with no locally adopted environmental plans.

Determination: No impact.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter or impair access to present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities. The proposed place of use and diversion do not exist on land designated as wilderness.

Determination: No impact.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

There should be no significant negative impact on human health from this proposed use.

Determination: No impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
Yes___ No_x__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No impact.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* None identified.

(b) *Local and state tax base and tax revenues?* None identified.

(c) *Existing land uses?* None identified.

(d) *Quantity and distribution of employment?* None identified.

(e) *Distribution and density of population and housing?* None identified.

(f) *Demands for government services?* None identified.

(g) *Industrial and commercial activity?* None identified.

(h) *Utilities?* None identified.

(i) *Transportation?* None identified.

(j) *Safety?* None identified.

(k) *Other appropriate social and economic circumstances?* None identified.

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: None identified.

Cumulative Impacts: None identified.

3. ***Describe any mitigation/stipulation measures:*** None identified.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** No reasonable alternatives were identified in the EA.

PART III. Conclusion

1. ***Preferred Alternative:*** None identified.

2 ***Comments and Responses:*** None.

3. ***Finding:***
Yes___ No __x__ Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

An EA is the appropriate level of analysis for the proposed action because no significant impacts were identified.

Name of person(s) responsible for preparation of EA:

Name: Melissa Brickl
Title: Hydrologist/Water Resource Specialist
Date: January 28, 2014